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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,942 04/02/2004 Antoon Johannes Gerardus van Rossum 005032.00053 8940

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BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

EXAMINER

KORNAKOV, MICHAIL

ART UNIT

PAPER NUMBER

1746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/815,942	Applicant(s) VAN ROSSUM ET AL.	
	Examiner Michael Kornakov	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/20/2006 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 29-37, 39-40 and new claim 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (U.S. 5,574,117) in view of JP 51127181. Yoshida discloses an ***alkali soluble film***, comprising an ***acrylic polymer as a binder***, which acrylic polymer is obtained by bulk polymerization and has a number average molecular weight **1,000-1,000,000** and M_w/M_n ratio of **less than 5**. **A glass transition temperature of the binder is -80°C or higher** (see abstract). Specific embodiments even cited by Applicants have glass transition temperature of 0 ° or higher (col.7, lines 40-47). The soluble film is removable ***by alkali solution and is useful as protective film coating for agricultural use*** (see col.8, lines 17-27). Specific monomers named in the instant claim 29 are found in Yoshida's Examples, such as Example 1-1 in col.43,

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44, Example 2-27 in col.53 and others. As for the acid value number, a broad teaching of Yoshida is that the acid value **is higher** than 65 mg/g, and there are several specific examples, such as example, which cite the acid values of **150mg/g**, which is a specific point within the claimed range. The acrylic polymer of Yoshida when used in compositions for protective coatings employs different additives, such as reinforcing agents, fillers, antioxidants, plasticizers, lubricants such as carbon black, silica based anhydrous salicylic acid **calcium carbonate** (col. 5, lines 35-40) and **titanium oxide** (col. 9, line 64), which are named as a pigments in the instant claim 35.

Yoshida further teaches that for an alkali soluble adhesive the polymer binder is combined with solvent wax, tackifier, and if 100 parts of a polymer is combined with 0-400 parts of solvent, 0-50 parts of wax, and 0-50 parts of tackifier, as taught by Yoshida, then the amount of a binder as set forth in the instant claims 34 and 36 is clearly within the claimed range. Example 2-21 shows the production of a polymer, which has weight average molecular weight **32,000, polydispersity 2.2, and acid value of 160mg/g.** ***These are all three characteristics within the claimed range disclosed in a single embodiment of Yoshida.*** See also Table 2-5 in col.53, Examples 2-15, comparative example 2-9 in col. 56, see also claims 5, 6 in col.60.

Polycarboxylic acid thickener is taught by Yoshida. The detergents taught by Yoshida throughout entire Patent are the pigment dividers of the instant claims.

Yoshida teaches the protective coating as instantly claimed with characteristics as instantly claimed. He does not specifically attribute such coating to a green house, however clearly motivates those skilled in the art to do so by utilizing his protective film

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coating removable by alkali solution for agricultural purposes. Yoshida specifically emphasizes the use of his compositions for alkali soluble films used in agriculture as protective coatings, films are having strength and superior in blocking resistance (see, for example, col.8, lines 4-25), thus merely not naming the "green house" Yoshida teaches the film for such intended use.

The use of films formed from polymers and copolymers of acrylates have long been known in the art.

Thus JP'118 discloses selectively light transmitting films comprising polyalkyl methacrylate type copolymer films as the base material, films transmitting $\geq 30\%$ of light of 0.4 to 0.7 μ in wavelength and reflecting $\geq 20\%$ of light of 2 to 10 μ in wavelength on ≥ 1 phase. Copolymer films formed by copolymerizing 26 to 97 wt. % of alkyl methacrylates containing 1-4C alkyl, 3-74 wt.% of alkyl acrylates having 1-8C alkyl and 0-40 wt.% of copolymerizing monomers (methacrylic acid, acrylonitrile, styrene, etc.). The films are **useful for agricultural greenhouses**, or covers for solar water heating devices.

Both Yoshida and JP'718 disclose substantially identical polymer films, wherein Yoshida teaches the characteristics as instantly claimed, and provides clear motivation and suggestion to use his films for protective coatings in agricultural use, and JP'718 teaches these polymers TO BE USED in a greenhouse. Therefore, there is a CLEAR MOTIVATION AND SUGGESTION IN BOTH REFERENCES TO USE THE POLYMER FILMS of Yoshida in a greenhouse as taught by JP'181.

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It is also noted that JP 5-170941 and US 5,519,964 also teach the use of substantially similar polymer films in greenhouses, thus showing that at the time the invention was made the use of polymer films of Applicants was conventionally used in green houses.

With regard to claim 41, the specific range of 10-20°C for the glass transition temperature is not specifically taught by Yoshida, however, the copolymer compositions having acid values of 65 or higher, polydispersity of 3 or less and glass transition temperature of higher than 0° C are clearly shown as admitted by Applicants in their response on page 8. Therefore, one skilled in the art having a knowledge that the glass transition temperature of a copolymer depends on the relative amounts of comonomers in copolymer and motivated by the disclosure of Yoshida of Tg higher than 0° C, would have found it obvious to optimize the amount of comonomers in order to achieve the desired Tg based on the desired properties of the resulting film.

4. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of JP'181 as applied to claim 29 above and further in view of Wieczorrek (U.S. 4,409,266).

While disclosing different additives that can be used as adhesion promoters, Yoshida and JP'181 do not specifically disclose silanes as adhesion promoters. Wieczorrek discloses shatterproof coating of glass surfaces by coating the surfaces with a coating composition. The glass surfaces to be coated being coated before application of the coating composition with a physically drying priming lacquer containing a **silane adhesion promoter** and a catalyst which accelerates hardening of the coating

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composition and, as binder, a polymer which has a linear molecular structure and which is soluble in lacquer solvents (abstract). Because all the references are concerned with the same problem of protective coating applied to glass with adhesion promoters, those skilled in the art would have found obvious to utilize silane adhesion promoter of Wieczorrek in the coating of Yoshida/EP'067, because doing so will enhance adhesion properties of the polymer film to the glass substrate.

Response to Arguments

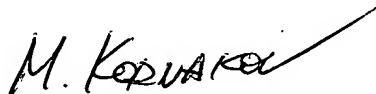
5. Applicant's arguments with respect to claims 29-41 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Kornakov
Primary Examiner
Art Unit 1746

February 1, 2007